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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,814	04/05/2004	Pei-Yuan Huang	HUAN3256/EM	5017
23364 7590 01/09/2008 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314				
			EXAMINER SERGENT, RABON A	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 01/09/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/816,814

Applicant(s)

HUANG ET AL.

Examiner

Rabon Sergeant

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

1. Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Firstly, with respect to claims 15-25, the use of the suffix, "-based", renders the claims indefinite, because it is unclear to what extent the repellent is based on or contains or is derived from solvent.

Secondly, with respect to claims 1 and 5, the words, "compound" and "compounds", has been spelled incorrectly.

Thirdly, with respect to claim 3, it is not seen that solvent constitutes a reaction agent, because it is not a reactant. Clarification of what applicants believe to be reaction agents is required.

Fourthly, with respect to claim 5, applicants have defined Ar as substituted phenyl; however, it is unclear if this definition requires substituents in addition to those already set forth within the structure.

Fifthly, with respect to claim 6, within the last segment, the first carbon group on the left has an incorrect structure or valence.

Sixthly, with respect to claim 7, applicants have failed to define the variable, Ar.

Lastly, with respect to claim 16, it is unclear what constitutes a semi-continuous polymerization reaction. It is unclear how a semi-continuous system differs from either a batch system or a continuous system.

2. Claim 16 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described

in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants have failed to define what constitutes a semi-continuous polymerization reaction.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-17, 22, and 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Bartelink et al. ('228).

Patentees disclose the treatment of textiles for oil and/or water repellency with a blocked perfluoro-polyurethane, wherein the polyurethane is produced by reacting a polyisocyanate, that

corresponds to that instantly claimed, with a polyol, that meets applicants' claimed crosslinking agent, and an isocyanate reactive perfluoro group-containing compound, that corresponds to that instantly claimed, and a blocking agent, that corresponds to that instantly claimed. Furthermore, patentees disclose that the polyurethane is used in the form a solution, wherein suitable solvents correspond to those instantly claimed. Furthermore, patentees disclose a sequence of reaction, reaction temperature conditions, and stoichiometry for the reaction of the polyisocyanate with the polyol that meets that claimed. See abstract; column 1, lines 51+; column 2, lines 1-47; column 3, lines 25+; column 4, lines 1-33; column 5, lines 15+; column 6, lines 1-61; column 8, lines 5+; and column 9, line 1.

5. Claims 18-21 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartelink et al. ('228).

As aforementioned, patentees disclose a process for producing a blocked perfluoro-polyurethane, wherein the polyurethane is produced by reacting a polyisocyanate, that corresponds to that instantly claimed, with a polyol, that meets applicants' claimed crosslinking agent, and an isocyanate reactive perfluoro group-containing compound, that corresponds to that instantly claimed, and a blocking agent, that corresponds to that instantly claimed. However, patentees fail to specifically disclose applicants' claimed stoichiometric ratios set forth within claims 18-20, the use of a solvent as set forth within claim 21, and the claimed processing times set forth within claims 23-25. Still, the position is taken that each of these claimed limitations would have been obvious to one of ordinary skill in the art at the time of invention in view of the state of the art and the teachings within the reference. With respect to claims 18-20, though the prior art does not specifically recite the molar ratios set forth for steps (b) and (c), the prior art is

clear that the ratios are controlled such that there is a sufficient quantity of perfluoro groups to obtain the desired goal of promoting water and/or oil repellency and there is substantially no free isocyanate or isocyanate reactive groups. Accordingly, since the fundamental steps and goals of the process are set forth, it would have been obvious to one of ordinary skill in the art to arrive at the claimed stoichiometric ratios through routine experimentation. With respect to claim 21, given the disclosed use of solvents at column 8, line 64 through column 9, line 1, the position is taken that it would have been obvious to incorporate them at any point in the process. It is noted that it has long been known within the polyurethane art to utilize solvents to regulate processing conditions and control viscosity. Finally, with respect to the time periods set forth within claims 23-25, the position is taken that the selection of such times amounts to little more than the control and optimization of common chemical engineering processing parameters.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.


RABON SERGENT
PRIMARY EXAMINER

R. Sergent
January 5, 2008